

SEQUENCE LISTING

<110> Eulenberg, Karsten
Meise, Martin
Molitor, Andreas
Steuernagel, Arnd

<120> Proteins Involved in the Regulation of Energy Homeostasis

<130> 2923-696

<150> PCT/EP03/11352

<151> 2003-10-14

<150> EP 02024747.4

<151> 2002-11-06

<150> EP 02023560.2

<151> 2002-10-22

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Ser Arg His Ser Ile Ser Glu Trp Arg Met Gln Ser Ile Ala Arg Asp
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Ser Asp Thr Glu Glu Met Phe Pro Lys Asp Ile Thr Lys Trp Ser Ser
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445

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Cys Val Gly Gly Ile Leu Ala Phe Asp Ala Leu Cys Tyr Ser Asn Gln
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Pro Lys Arg Gln Leu Pro Arg Lys Arg Ser Asp Ser Ser Thr Tyr Glu
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Ser Val Leu Arg Thr Glu Pro Cys Ser Arg His Ser Ser Ser Ser Thr
690 695 700

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Asp Leu Phe Leu Phe Gly Cys Pro Leu Gly Leu Val Leu Ala Leu Arg
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Lys Thr Val Ile Pro Ala Leu Asp Val Phe Gln Leu Arg Pro Ala Cys
740 745 750

Gln Gln Val Tyr Asn Leu Phe His Pro Ala Asp Pro Ser Ala Ser Arg
755 760 765

Leu Glu Pro Leu Leu Glu Arg Arg Phe His Ala Leu Pro Pro Phe Ser
770 775 780

Val Pro Arg Tyr Gln Arg Tyr Pro Leu Gly Asp Gly Cys Ser Thr Leu
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Pro Thr Thr Pro Gly Pro His Pro Pro Ala Arg Lys Ala Ser Pro Gly
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Val Ser Val Phe Thr Pro Ser Lys Pro Arg Glu Lys Trp Gln Arg Lys
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Thr Ile Pro Glu Ser His Arg Leu Gly Val Gly Val Tyr Pro Ile
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Lys Met Val Val Arg Gly Asp His Thr Phe Ala Asp Ser Tyr Ile
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Ile Glu Thr Met Gly Lys Leu Asp Glu His Gln Gly Glu Gly Thr Ala
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Val Ser Leu Arg Arg Gln Arg Phe Pro Ala Gln Gly Ser Ile Glu Ile
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His Glu Asp Ser Glu Glu Gly Cys Pro Gln Arg Ser Cys Lys Thr His
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Val Leu Leu Leu Val Leu His Gly Gly Asn Ile Leu Asp Thr Gly Ala

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Gly Ser Pro Leu Gly Leu Val Leu Ala Met Arg Arg Thr Val Leu Pro
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Gly Leu Asp Gly Phe Gln Val Arg Pro Ala Cys Ser Gln Val Tyr Ser
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Glu Pro Lys Phe His Leu Val Pro Pro Val Ser Val Pro Arg Tyr Gln
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Tyr Gly Pro Leu Asp Met Val Ala Leu Thr Gly Glu Lys Val Asp Ile
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Leu Val Met Ala Glu Pro Ser Ser Gly Arg Trp Val His Leu Asp Thr
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Glu Ile Thr Asn Ser Ser Gly Arg Ile Thr Tyr Asn Val Pro Arg Pro
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Arg Arg Leu Gly Val Gly Val Tyr Pro Val Lys Met Val Val Arg Gly
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Glu Cys Val Val Phe Ser Ile Asp Gly Ser Phe Ala Ala Ser Val Ser
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Ile Met Gly Ser Asp Pro Lys Val Arg Pro Gly Ala Val Asp Val Val
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Arg His Trp Gln Asp Leu Gly Tyr Met Ile Leu Tyr Ile Thr Gly Arg
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Pro Asp Met Gln Lys Gln Arg Val Val Ser Trp Leu Ser Gln His Asn
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Phe Pro Gln Gly Met Ile Phe Phe Ser Asp Gly Leu Val His Asp Pro
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Leu Arg Gln Lys Ala Ile Phe Leu Arg Asn Leu Met Gln Glu Cys Phe
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Ile Lys Ile Ser Ala Ala Tyr Gly Ser Thr Lys Asp Ile Ser Val Tyr
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Ser Val Leu Gly Leu Pro Ala Ser Gln Ile Phe Ile Val Gly Arg Pro
850 855 860

Thr Lys Lys Tyr Gln Thr Gln Cys Gln Phe Leu Ser Glu Gly Tyr Ala
865 870 875 880

Ala His Leu Ala Val Leu Glu Ala Ser His Arg Ser Arg Pro Lys Lys
885 890 895

Asn Asn Ser Arg Met Ile Leu Arg Lys Gly Ser Phe Gly Leu His Ala
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Gln Pro Glu Phe Leu Arg Lys Arg Asn His Leu Arg Arg Thr Met Ser
915 920 925

Val Gln Gln Pro Asp Pro Pro Ala Ala Asn Pro Lys Pro Glu Arg Ala
930 935 940

Gln Ser Gln Pro Glu Ser Asp Lys Asp His Glu Arg Pro Leu Pro Ala
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Thr	Asp	Gly	Pro	Gly	Gly	Ser	Gly	Gln	Tyr	Thr	His	Lys	Val	Tyr	His			
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Val	Gly	Ser	His	Ile	Pro	Gly	Trp	Phe	Arg	Ala	Leu	Leu	Pro	Lys	Ala			
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Ala	Leu	Gln	Val	Glu	Glu	Glu	Ser	Trp	Asn	Ala	Tyr	Pro	Tyr	Thr	Arg			
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Thr	Arg	Tyr	Thr	Cys	Pro	Phe	Val	Glu	Lys	Phe	Ser	Ile	Glu	Ile	Glu			
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Thr	Tyr	Tyr	Leu	Pro	Asp	Gly	Gly	Gln	Gln	Pro	Asn	Val	Phe	Asn	Leu			
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Ser	Gly	Ala	Glu	Arg	Arg	Gln	Arg	Ile	Leu	Asp	Thr	Ile	Asp	Ile	Val			
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Arg	Asp	Ala	Val	Ala	Pro	Gly	Glu	Tyr	Lys	Ala	Glu	Glu	Asp	Pro	Arg			
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Ala	Arg	Thr	Ala	Ala	Gln	Thr	Gly	Pro	Leu	Met	Cys	Ala	Tyr	Lys	Leu			
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Cys	Lys	Val	Glu	Phe	Arg	Tyr	Trp	Gly	Met	Gln	Ala	Lys	Ile	Glu	Gln			
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Ala	His	Glu	Gly	Phe	Ser	Asp	Ser	Glu	Glu	Val	Phe	Pro	Lys	Glu	Met
		355					360					365			
Thr	Lys	Trp	Asn	Ser	Asn	Asp	Phe	Ile	Asp	Ala	Phe	Ala	Ser	Pro	Val
	370					375					380				
Glu	Ala	Glu	Gly	Thr	Pro	Glu	Pro	Gly	Ala	Glu	Ala	Ala	Lys	Gly	Ile
385					390					395					400
Glu	Asp	Gly	Ala	Gln	Ala	Pro	Arg	Asp	Ser	Glu	Gly	Leu	Asp	Gly	Ala
				405					410					415	
Gly	Glu	Leu	Gly	Ala	Glu	Ala	Cys	Ala	Val	His	Ala	Leu	Phe	Leu	Ile
			420					425					430		
Leu	His	Ser	Gly	Asn	Ile	Leu	Asp	Ser	Gly	Pro	Gly	Asp	Ala	Asn	Ser
		435					440					445			

Lys Gln Ala Asp Val Gln Thr Leu Ser Ser Ala Phe Glu Ala Val Thr
 450 455 460

Arg Ile His Phe Pro Glu Ala Leu Gly His Val Ala Leu Arg Leu Val
 465 470 475 480

Pro Cys Pro Pro Ile Cys Ala Ala Ala Tyr Ala Leu Val Ser Asn Leu
 485 490 495

Ser Pro Tyr Ser His Asp Gly Asp Ser Leu Ser Arg Ser Gln Asp His
 500 505 510

Ile Pro Leu Ala Ala Leu Pro Leu Leu Ala Thr Ser Ser Ser Arg Tyr
 515 520 525

Gln Gly Ala Val Ala Thr Val Ile Ala Arg Thr Asn Gln Ala Tyr Ser
 530 535 540

Ala Phe Leu Arg Ser Pro Glu Gly Ala Gly Phe Cys Gly Gln Val Ala
 545 550 555 560

Leu Ile Gly Asp Gly Val Gly Gly Ile Leu Gly Phe Asp Ala Leu Cys
 565 570 575

His Ser Ala Asn Ala Gly Thr Gly Ser Arg Gly Ser Ser Arg Arg Gly
 580 585 590

Ser Met Asn Asn Glu Leu Leu Ser Pro Glu Phe Gly Pro Val Arg Asp
 595 600 605

Pro Leu Ala Asp Gly Val Glu Gly Leu Gly Arg Gly Ser Pro Glu Pro
 610 615 620

Ser Ala Leu Pro Pro Gln Arg Ile Pro Ser Asp Met Ala Ser Pro Glu
 625 630 635 640

Pro Glu Gly Ser Gln Asn Ser Leu Gln Ala Ala Pro Ala Thr Thr Ser
 645 650 655

Ser Trp Glu Pro Arg Arg Ala Ser Thr Ala Phe Cys Pro Pro Ala Ala
 660 665 670

Ser Ser Glu Ala Pro Asp Gly Pro Ser Ser Thr Ala Arg Leu Asp Phe
 675 680 685

Lys Val Ser Gly Phe Phe Leu Phe Gly Ser Pro Leu Gly Leu Val Leu
 690 695 700

Ala Leu Arg Lys Thr Val Met Pro Ala Leu Glu Ala Ala Gln Met Arg
 705 710 715 720

Pro Ala Cys Glu Gln Ile Tyr Asn Leu Phe His Ala Ala Asp Pro Cys
 725 730 735

Ala Ser Arg Leu Glu Pro Leu Leu Ala Pro Lys Phe Gln Ala Ile Ala
 740 745 750

Pro Leu Thr Val Pro Arg Tyr Gln Lys Phe Pro Leu Gly Asp Gly Ser
 755 760 765

Ser Leu Leu Leu Ala Asp Thr Leu Gln Thr His Ser Ser Leu Phe Leu
 770 775 780

Glu Glu Leu Glu Met Leu Val Pro Ser Thr Pro Thr Ser Thr Ser Gly
 785 790 795 800

Ala Phe Trp Lys Gly Ser Glu Leu Ala Thr Asp Pro Pro Ala Gln Pro
 805 810 815

Ala Ala Pro Ser Thr Thr Ser Glu Val Val Lys Ile Leu Glu Arg Trp
 820 825 830

Trp Gly Thr Lys Arg Ile Asp Tyr Ser Leu Tyr Cys Pro Glu Ala Leu
 835 840 845

Thr Ala Phe Pro Thr Val Thr Leu Pro His Leu Phe His Ala Ser Tyr
 850 855 860

Trp Glu Ser Ala Asp Val Val Ala Phe Ile Leu Arg Gln Val Ile Glu
 865 870 875 880

Lys Glu Arg Pro Gln Leu Ala Glu Cys Glu Glu Pro Ser Ile Tyr Ser
 885 890 895

Pro Ala Phe Pro Arg Glu Lys Trp Gln Arg Lys Arg Thr Gln Val Lys
 900 905 910

Ile Arg Asn Val Thr Ser Asn His Arg Ala Ser Asp Thr Val Val Cys
 915 920 925

Glu Gly Arg Pro Gln Val Leu Ser Gly Arg Phe Met Tyr Gly Pro Leu
 930 935 940

Asp Val Val Thr Leu Thr Gly Glu Lys Val Asp Val Tyr Ile Met Thr
 945 950 955 960

Gln Pro Leu Ser Gly Lys Trp Ile His Phe Gly Thr Glu Val Thr Asn
 965 970 975

Ser Ser Gly Arg Leu Thr Phe Pro Val Pro Pro Glu Arg Ala Leu Gly
 980 985 990

Ile Gly Val Tyr Pro Val Arg Met Val Val Arg Gly Asp His Thr Tyr
 995 1000 1005

Ala Glu Cys Cys Leu Thr Val Val Ala Arg Gly Thr Glu Ala Val
 1010 1015 1020

Val Phe Ser Ile Asp Gly Ser Phe Thr Ala Ser Val Ser Ile Met
 1025 1030 1035

Gly Ser Asp Pro Lys Val Arg Ala Gly Ala Val Asp Val Val Arg
 1040 1045 1050

His Trp Gln Asp Ser Gly Tyr Leu Ile Val Tyr Val Thr Gly Arg
 1055 1060 1065

Pro Asp Met Gln Lys His Arg Val Val Ala Trp Leu Ser Gln His
 1070 1075 1080

Asn Phe Pro His Gly Val Val Ser Phe Cys Asp Gly Leu Thr His
 1085 1090 1095

Asp Pro Leu Arg Gln Lys Ala Met Phe Leu Gln Ser Leu Val Gln

1100		1105		1110
Glu Val Gly Leu Asn Ile Val Ala Gly Tyr Gly Ser Pro Lys Asp				
1115		1120		1125
Val Ala Val Tyr Thr Ala Leu Gly Leu Ser Pro Ser Gln Thr Tyr				
1130		1135		1140
Ile Val Gly Arg Ala Val Arg Lys Leu Gln Ala Gln Cys Gln Phe				
1145		1150		1155
Leu Ser Asp Gly Tyr Val Ala His Leu Gly Gln Leu Glu Ala Gly				
1160		1165		1170
Ser His Ser His Ala Ser Ser Gly Pro Pro Arg Ala Ala Leu Gly				
1175		1180		1185
Lys Ser Ser Tyr Gly Val Ala Ala Pro Val Asp Phe Leu Arg Lys				
1190		1195		1200
Gln Ser Gln Leu Leu Arg Ser Arg Gly Pro Ser Gln Ala Glu Arg				
1205		1210		1215
Glu Gly Pro Gly Thr Pro Pro Thr Thr Leu Ala Arg Gly Lys Ala				
1220		1225		1230
Arg Ser Ile Ser Leu Lys Leu Asp Ser Glu Glu				
1235		1240		

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 <211> 1250
 <212> PRT
 <213> Drosophila melanogaster

<400> 37

Met Leu Ile Lys Glu Tyr Arg Ile Pro Leu Pro Leu Thr Val Glu Glu			
1	5	10	15
Tyr Arg Ile Ala Gln Leu Tyr Met Ile Ala Lys Lys Ser Arg Glu Glu			
20	25	30	
Ser His Gly Glu Gly Ser Gly Val Glu Ile Ile Ile Asn Glu Pro Tyr			

35

40

45

Lys Asp Gly Pro Gly Gly Asn Gly Gln Tyr Thr Lys Lys Ile Tyr His
50 55 60

Val Gly Asn His Leu Pro Gly Trp Ile Lys Ser Leu Leu Pro Lys Ser
65 70 75 80

Ala Leu Thr Val Glu Glu Glu Ala Trp Asn Ala Tyr Pro Tyr Thr Arg
85 90 95

Thr Arg Tyr Thr Cys Pro Phe Val Glu Lys Phe Ser Leu Asp Ile Glu
100 105 110

Thr Tyr Tyr Tyr Pro Asp Asn Gly Tyr Gln Asp Asn Val Phe Gln Leu
115 120 125

Ser Gly Ser Asp Leu Arg Asn Arg Ile Val Asp Val Ile Asp Ile Val
130 135 140

Lys Asp Gln Leu Trp Gly Gly Asp Tyr Val Lys Glu Glu Asp Pro Lys
145 150 155 160

His Phe Val Ser Asp Lys Thr Gly Arg Gly Pro Leu Ala Glu Asp Trp
165 170 175

Leu Glu Glu Tyr Trp Arg Glu Val Lys Gly Lys Lys Gln Pro Thr Pro
180 185 190

Arg Asn Met Ser Leu Met Thr Ala Tyr Lys Ile Cys Arg Val Glu Phe
195 200 205

Arg Tyr Trp Gly Met Gln Thr Lys Leu Glu Lys Phe Ile His Asp Val
210 215 220

Ala Leu Arg Lys Met Met Leu Arg Ala His Arg Gln Ala Trp Ala Trp
225 230 235 240

Gln Asp Glu Trp Phe Gly Leu Thr Ile Glu Asp Ile Arg Glu Leu Glu
245 250 255

Arg Gln Thr Gln Leu Ala Leu Ala Lys Lys Met Gly Gly Gly Glu Glu
 260 265 270

Cys Ser Asp Asp Ser Val Ser Glu Pro Tyr Val Ser Thr Ala Ala Thr
 275 280 285

Ala Ala Ser Thr Thr Gly Ser Glu Arg Lys Lys Ser Ala Pro Ala Val
 290 295 300

Pro Pro Ile Val Thr Gln Gln Pro Pro Ser Ala Glu Ala Ser Ser Asp
 305 310 315 320

Glu Glu Gly Glu Glu Glu Glu Asp Asp Asp Glu Asp Glu Asn Asp Ala
 325 330 335

Ile Gly Thr Gly Val Asp Leu Ser Ala Asn Gln Gly Gly Ser Ala Gln
 340 345 350

Arg Ser Arg Ser Gln Ser Ile Gln Met Ala Gln Lys Gly Lys Phe Gly
 355 360 365

Ser Lys Gly Ala Leu His Ser Pro Val Gly Ser Ala His Ser Phe Asp
 370 375 380

Leu Gln Val Ala Asn Trp Arg Met Glu Arg Leu Glu Val Asp Ser Lys
 385 390 395 400

Ser Asn Ser Asp Glu Glu Phe Phe Asp Cys Leu Asp Thr Asn Glu Thr
 405 410 415

Asn Ser Leu Ala Lys Trp Ser Ser Leu Glu Leu Leu Gly Glu Gly Asp
 420 425 430

Asp Ser Pro Pro Pro His Gly Gly Pro Ser Ser Ala Ala Ser Val Gly
 435 440 445

Gly Arg Gly Asn Ser Arg Gln Glu Asp Ser Ile Phe Asn Gln Asp Phe
 450 455 460

Leu Met Arg Val Ala Ser Glu Arg Gly Asn Lys Arg Gln Leu Arg Ser
 465 470 475 480

Ser Ala Ser Val Asp Arg Ser His Asp Ser Ser Pro Pro Gly Ser Pro
 485 490 495

Ser Thr Pro Ser Cys Pro Thr Thr Ile Leu Ile Leu Val Val His Ala
 500 505 510

Gly Ser Val Leu Asp Ala Ala Ser Glu Leu Thr Ala Lys Lys Ser Asp
 515 520 525

Val Thr Thr Phe Arg Gly Ser Phe Glu Ala Val Met Arg Gln His Tyr
 530 535 540

Pro Ser Leu Leu Thr His Val Thr Ile Lys Met Val Pro Cys Pro Ser
 545 550 555 560

Ile Cys Thr Asp Ala Leu Gly Ile Leu Ser Ser Leu Ser Pro Tyr Ser
 565 570 575

Phe Asp Ala Ser Pro Ser Ala Ala Asp Ile Pro Asn Ile Ala Asp Val
 580 585 590

Pro Ile Gly Ala Ile Pro Leu Leu Ser Val Ala Ser Pro Glu Phe His
 595 600 605

Glu Thr Val Asn Lys Thr Val Ala Ala Ala Asn Ile Val Tyr His Glu
 610 615 620

Phe Leu Lys Ser Glu Glu Gly His Gly Phe Ser Gly Gln Ile Val Met
 625 630 635 640

Leu Gly Asp Ser Met Gly Ser Leu Leu Ala Tyr Glu Ala Leu Cys Arg
 645 650 655

Ser Asn Gly Ser Gln Pro Gly Thr Ala Ser Gly Ala Ser Asn Ser Gly
 660 665 670

Gly Asp Ala Ala Thr Asn Ile Asn Thr His Asn Pro Leu Ser Pro Arg
 675 680 685

Asn Ser Arg Leu Asp Asp Asp Glu Arg Phe Ile Glu Ala Asp Leu Asp
 690 695 700

Ala	Lys	Arg	Leu	Leu	Val	Ala	Pro	Ser	Pro	Arg	Arg	Arg	Arg	Ser	Ser	705		710		715		720
Ser	Ser	Ser	Asp	Ser	Arg	Ala	Thr	Lys	Leu	Asp	Phe	Glu	Val	Cys	Asp		725		730		735	
Phe	Phe	Met	Phe	Gly	Ser	Pro	Leu	Ser	Val	Val	Leu	Ala	Ala	Arg	Lys		740		745		750	
Leu	His	Asp	Ala	Lys	Ala	Ala	Leu	Pro	Arg	Pro	Asn	Cys	His	Gln	Val		755		760		765	
Tyr	Asn	Leu	Phe	His	Pro	Thr	Asp	Pro	Ile	Ala	Ser	Arg	Leu	Glu	Pro	770		775		780		
Leu	Leu	Ser	Ala	Arg	Phe	Ser	Ile	Leu	Ala	Pro	Val	Asn	Val	Pro	Arg	785		790		795		
Tyr	Ala	Lys	Tyr	Pro	Leu	Gly	Asn	Gly	Gln	Pro	Leu	His	Leu	Leu	Glu		805		810		815	
Val	Ile	Gln	Ser	His	Pro	Gln	His	Phe	Asn	Asp	Gly	Asn	Asn	Leu	Leu		820		825		830	
Ala	Gly	Arg	Arg	Leu	Ser	Asp	Ala	Ser	Met	Gln	Ser	Thr	Ile	Ser	Gly		835		840		845	
Leu	Ile	Glu	Asn	Val	Ser	Leu	Ser	Thr	Ile	His	Ala	Leu	Gln	Asn	Lys	850		855		860		
Trp	Trp	Gly	Thr	Lys	Arg	Leu	Asp	Tyr	Ala	Leu	Tyr	Cys	Pro	Glu	Gly	865		870		875		
Leu	Ser	Asn	Phe	Pro	Ala	His	Ala	Leu	Pro	His	Leu	Phe	His	Ala	Ser		885		890		895	
Tyr	Trp	Glu	Ser	Pro	Asp	Val	Ile	Ala	Phe	Ile	Leu	Arg	Gln	Ile	Gly		900		905		910	
Lys	Phe	Glu	Gly	Ile	Pro	Phe	Val	Gly	Ser	Asn	Asp	Asp	Lys	Asp	Asn							

915

920

925

Ala Ser Phe His Pro Gly Gln Pro Arg Glu Lys Trp Ile Lys Lys Arg
 930 935 940

Thr Ser Val Lys Leu Lys Asn Val Ala Ala Asn His Arg Ala Asn Asp
 945 950 955 960

Val Ile Val Gln Glu Gly Arg Glu Gln Arg Leu Asn Ala Arg Phe Met
 965 970 975

Tyr Gly Pro Leu Asp Met Ile Thr Leu His Gly Glu Lys Val Asp Val
 980 985 990

His Ile Met Lys Asp Pro Pro Ala Gly Glu Trp Thr Phe Leu Ser Thr
 995 1000 1005

Glu Val Thr Asp Lys Asn Gly Arg Ile Ser Tyr Ser Ile Pro Asp
 1010 1015 1020

Gln Val Ser Leu Gly Tyr Gly Ile Tyr Pro Val Lys Met Val Val
 1025 1030 1035

Arg Gly Asp His Thr Ser Val Asp Cys Tyr Met Ala Val Val Pro
 1040 1045 1050

Pro Leu Thr Glu Cys Val Val Phe Ser Ile Asp Gly Ser Phe Thr
 1055 1060 1065

Ala Ser Met Ser Val Thr Gly Arg Asp Pro Lys Val Arg Ala Gly
 1070 1075 1080

Ala Val Asp Val Cys Arg His Trp Gln Glu Leu Gly Tyr Leu Leu
 1085 1090 1095

Ile Tyr Ile Thr Gly Arg Pro Asp Met Gln Gln Gln Arg Val Val
 1100 1105 1110

Ser Trp Leu Ser Gln His Asn Phe Pro His Gly Leu Ile Ser Phe
 1115 1120 1125

Ala Asp Gly Leu Ser Thr Asp Pro Leu Gly His Lys Thr Ala Tyr
1130 1135 1140

Leu Asn Asn Leu Val Gln Asn His Gly Ile Ser Ile Thr Ala Ala
1145 1150 1155

Tyr Gly Ser Ser Lys Asp Ile Ser Val Tyr Thr Asn Val Gly Met
1160 1165 1170

Arg Thr Asp Gln Ile Phe Ile Val Gly Lys Val Gly Lys Lys Leu
1175 1180 1185

Gln Ser Asn Ala Thr Val Leu Ser Asp Gly Tyr Ala Ala His Leu
1190 1195 1200

Ala Gly Leu Gln Ala Val Gly Gly Ser Arg Pro Ala Lys Gly Asn
1205 1210 1215

Ala Arg Met Val Ile Pro Arg Gly Cys Phe Asn Leu Pro Gly Gln
1220 1225 1230

Thr Ala Asn Pro Arg Arg Arg Arg Leu His Glu Gln Ala Thr Asn
1235 1240 1245

Glu Asn
1250